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| 09/996,518      | 11/29/2001  | Katsuhiko Doi        | 450100-03654        | 3535             |

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EXAMINER

LUK, EMMANUEL S

ART UNIT PAPER NUMBER

1722

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                   |  |
|------------------------------|--------------------------------------|-----------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/996,518 | <b>Applicant(s)</b><br>DOI ET AL. |  |
|                              | <b>Examiner</b><br>Emmanuel S. Luk   | <b>Art Unit</b><br>1722           |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claim states that the cavity is exhausted directly by the vacuum apparatus without passing through any vacuum lines or conduits. Yet, it is CLEARLY marked that there is an exhaustion channel (3) in the specification and the drawing leading from the cavity to the vacuum. This contradicts the claimed invention.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim states the vacuum tank is connected to the cavity via an exhaustion channel. However, the parent claim of claim 3 states that the "air and/or fluid inside the cavity is exhausted directly by said vacuum apparatus without passing through any vacuum lines or conduits". This is in conflict with the exhaustion channel as conduits, lines, and channels are passageways.

4. Claims 2 and 3 have invoked means plus function pursuant to 35 U.S.C. 112, sixth paragraph. Where means plus function language is used to define the characteristics of a machine or manufacture invention, claim limitations must be interpreted to read on only the structures or materials disclosed in the specification and "equivalents thereof." (Two en banc decisions of the Federal Circuit have made clear that the Office is to interpret means plus function language according to 35 U.S.C. 112, sixth paragraph. In the first, *In re Donaldson*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1848 (Fed. Cir. 1994), the court held:

The plain and unambiguous meaning of paragraph six is that one construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure.

The claims have invoked 112, sixth paragraph, by claiming exhaustion means for exhausting in a short period of time. The specification describes the structure with the gas vent (4), channel (3), vacuum tank (31), space (34), and vacuum circuit (34). These elements and how they are constructed is claimed in the exhaustion means.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozeki (4997026) in view of Lebensfeld (5453000).

Ozeki teaches a gas venting apparatus for a molding apparatus, where a vacuum apparatus (100; gas venting device) is within the die apparatus (1) in close proximity to the cavity (4) and circumferentially above the cavity (Fig. 1) and air is exhausted directly by the vacuum apparatus, a valve (106) is provided for opening and closing of the passage of the exhaustion channel, the exhaustion channel being the channel that leaves from the chamber (13) towards the exhaustion channel, or exhaust port (110).

Ozeki fails to teach a vacuum tank and the tank being at least a larger than a total volume capacity of the cavity plus said exhaustion channel.

However, Ozeki does teach a vacuum apparatus located in the die apparatus. Lebensfeld teaches a molding apparatus wherein the mold (80) is in close proximity to the vacuum tank (61) (Fig. 14-18). The pump is located inside the housing (12) of the apparatus along with the mold (80). One of ordinary skill in the art would recognize of the placement of the vacuum tank of Lebensfeld adjacent to the exhaust port (110) of

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Ozeki as it would allow for the tank to be placed within the die apparatus since the Lebensfeld invention calls for the vacuum tank to be within the housing of the die apparatus. It can be construed as being in close proximity with the cavity. In regards to circumferentially above the cavity, the tank of Lebensfeld has the equivalent function whether it is located adjacent or circumferentially above the cavity.

It would have been obvious to one of ordinary skill in the art to modify Ozeki with the tank as taught by Lebensfeld because it allows for portability of the entire apparatus in a single housing.

In regards to the product, Ozeki and Lebensfeld both teach a unitary molded product being produced. Both references are capable of creating a disc-shaped product it is merely a change in shape of the molding surface. The shape of the molding surface in creating the shaped product is a design choice of the user.

In regards to the size of the vacuum tank, it would have been obvious to one skilled in the art to change the size of the tank for the desired vacuum effect on the cavity it is merely relative size. Lebensfeld also teaches the use of the tank for producing a partial vacuum in the cavity. Thus, a larger tank size for achieving a complete vacuum of the cavity.

In regards to the "without passing through any vacuum lines or conduits", the vacuum apparatus (100) is placed directly with the cavity as seen figure 1, so the air and/or fluid of the cavity will be exhausted directly by the vacuum apparatus (100).

***Allowable Subject Matter***

8. Claims 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach the structure taught that includes the exhaustion means as defined by the specification.

***Response to Arguments***

10. Applicant's arguments filed 1/28/2005 have been fully considered but they are not persuasive. The applicant's argument concerning the 35 U.S.C. §112 rejection have not been obviated, the arguments concerning the definition by Lebensfeld has been noted. However, the terms of vacuum lines or **conduits** [emphasis added] are broad enough that this contradicts with the claimed structure. If the applicant's can view a dictionary such as Webster's Ninth New Collegiate Dictionary (1985), one of the definitions of conduit is "a natural or artificial channel through which something (as a fluid) is conveyed". The rejection on the claims for 35 U.S.C. §112 stands.

The applicant's argument concerning Osada and Lebensfeld focuses on the positioning of the vacuum tank apparatus in proximity to the cavity and the lack vacuum lines or conduits. However, while the applicants try to distinguish a vacuum line and conduit, there is little difference from this from an exhaustion channel, as it is any

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passageway that provides for the air/fluid to pass through and in this particular case, to vent away from the cavity. The location of the tank of Lebensfeld close to the cavity within the housing and it has the same functionality. Osada as applicants have pointed out still teaches, even if it does not show, a vacuum system. This can be interpreted by one of ordinary skill in the art to the various devices that can be utilized for vacuum, including a vacuum tank, which is extremely well known in the vacuum arts. The argument concerning close proximity is noted, however, lebensfeld teaches close proximity of the vacuum tank. The argument concerning a child's toy of Lebensfeld is noted, however it is more of an intended use argument. It is still a molding apparatus that allows the emphasis on portability and the concept of incorporation of the elements together into an integral unit is an obvious design choice of

The arguments on pages 10-12 are noted, however the arguments of scale and the use of the materials are not persuasive. Examiner is not persuaded about the different types of material used since Lebensfeld is used for the vacuum elements in the mold and NOT for what or how the material is molded. Both references incorporate vacuums and said vacuum systems are connected to a mold cavity. These are important and relevant to one skilled in the art and the use of one of device that is in close proximity to the mold can be portability issue for saving space on the factory, thereby negating the scale argument.



***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel S. Luk whose telephone number is (571) 272-1134. The examiner can normally be reached on Monday-Thursday 8 to 5 and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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JOSEPH S. DEL SOLE  
PRIMARY EXAMINER  
4/14/06